

CLAIMS

What is claimed is:

1. A method comprising:

receiving packets of data in a first queue, each of the packets having one of a plurality of priorities, the plurality of priorities including a first priority and a second priority;

copying a first plurality of packets from the first queue to a second queue;

scheduling a first subset of packets from the second queue;

determining whether the second queue includes a packet with the first priority;

if the second queue includes a packet with a first priority, scheduling a second subset of packets from the second queue; and

if the second queue does not include a packet with the first priority, copying a second plurality of packets from the first queue to the second queue.

2. The method of claim 1, wherein each subset of packets scheduled from the second queue includes one or more of packets of the first priority if the second queue contains packets of the first priority and one or more packets of the second priority if the second queue contains packets of the second priority.
3. The method of claim 2, wherein packets are scheduled according to a weighted round robin scheduling.
4. The method of claim 1, wherein the first queue and the second queue each contain a plurality of sub-queues, each of the plurality of sub-queues representing one of the plurality of priority levels.

5. The method of claim 1, further comprising determining whether the second queue contains one or more packets of the first priority after copying the second plurality of packets into the queue.
6. The method of claim 5, further comprising commencing a delay period if the second queue does not contain one or more packets of the first priority after copying the second plurality of packets into the second queue.
7. The method of claim 6, further comprising continuing scheduling of packets after a determination that there are no packets of the first priority in the second queue if the delay period is active.
8. The method of claim 6, wherein commencing the delay period comprises starting a timer.
9. A scheduler comprising:
 - a first queue, the first queue to receive packets of data, each packet of data having one of a plurality of different priority levels, the plurality of different priority levels including a first priority;
 - a second queue, the second queue to contain packets copied from the first queue;
 - and
 - a scheduling module, the scheduling module to schedule packets from the second queue;

the scheduler to copy packets from the first queue to the second queue;

the scheduler to determine whether the second queue contains packets of the first priority, and, if there are no packets of the first priority to copy additional packets from the first queue to the second queue.

10. The scheduler of claim 9, wherein sets of packets scheduled from the second queue each include one or more of packets of the first priority if the second queue contains packets of the first priority and one or more packets of a second priority if the second queue contains packets of the second priority.
11. The scheduler of claim 10, wherein packets are scheduled according to a weighted round robin scheduling.
12. The scheduler of claim 9, wherein the first queue and the second queue each comprise a plurality of sub-queues, each of the plurality of sub-queues representing one of the plurality of priority levels.
13. The scheduler of claim 9, wherein the scheduler is further to determine whether the second queue contains one or more packets of the first priority after copying packets into the second queue.
14. The scheduler of claim 13, further comprising a timer, the scheduler to start the timer if the scheduler determines that the second queue does not contain one or more packets of the first priority after copying packets into the second queue.
15. The scheduler of claim 14, wherein the scheduler is to continue scheduling packets if the timer is active.

16. A system comprising:
 - a memory; and
 - a scheduler, the scheduler to receive data from the memory, the scheduler comprising:
 - a first queue, the first queue to receive packets of data, each packet of data having one of a plurality of different priority levels, the plurality of different priority levels including a first priority;
 - a second queue, the second queue to contain packets copied from the first queue; and
 - a scheduling module, the scheduling module to schedule packets from the second queue;
 - the scheduler to copy packets from the first queue to the second queue;
 - the scheduler to determine whether the second queue contains packets of the first priority, and, if there are no packets of the first priority to copy additional packets from the first queue to the second queue.
17. The system of claim 16, further comprising a processor and a bus, the processor and memory being coupled with the bus.
18. The system of claim 16, wherein sets of packets scheduled from the second queue each include one or more of packets of the first priority if the second queue contains packets of the first priority and one or more packets of the second priority if the second queue contains packets of the second priority.

19. The system of claim 18, wherein packets are scheduled according to a weighted round robin scheduling.
20. The system of claim 16, wherein the first queue and the second queue each comprise a plurality of sub-queues, each of the plurality of sub-queues representing one of the plurality of priority levels.
21. The system of claim 16, wherein the scheduler is further to determine whether the second queue contains one or more packets of the first priority after copying packets into the second queue.
22. The system of claim 21, further comprising a timer, the scheduler to start the timer if the second queue does not contain one or more packets of the first priority after copying the second plurality of packets into the second queue.
23. The system of claim 22, wherein the scheduler is to continue scheduling packets if the timer is active.
24. A machine-readable medium having stored thereon data representing sequences of instructions that, when executed by a processor, cause the processor to perform operations comprising:
receiving packets of data in a first queue, each of the packets having one of a plurality of priorities, the plurality of priorities including a first priority and a second priority;
copying a first plurality of packets from the first queue to a second queue;
scheduling a first subset of packets from the second queue;
determining whether the second queue includes a packet with the first priority;

- if the second queue includes a packet with a first priority, scheduling a second subset of packets from the second queue; and
- if the second queue does not include a packet with the first priority, copying a second plurality of packets from the first queue to the second queue.
25. The medium of claim 24, wherein each subset of packets scheduled from the second queue includes one or more of packets of the first priority if the second queue contains packets of the first priority and one or more packets of the second priority if the second queue contains packets of the second priority.
26. The medium of claim 25, wherein packets are scheduled according to a weighted round robin scheduling.
27. The medium of claim 24, wherein the first queue and the second queue each contain a plurality of sub-queues, each of the plurality of sub-queues representing one of the plurality of priority levels.
28. The medium of claim 24, further comprising instructions for determining whether the second queue contains one or more packets of the first priority after copying the second plurality of packets into the queue.
29. The medium of claim 28, further comprising instructions for commencing a delay period if the second queue does not contain one or more packets of the first priority after copying the second plurality of packets into the second queue.

30. The medium of claim 29, further comprising instructions for continuing scheduling of packets after a determination that there are no packets of the first priority in the second if the delay period is active.